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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,497	12/14/2001	Ashraf S. Hasan Mahmoud	08893269US	9993

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EXAMINER

JONES, PRENELL P

ART UNIT

PAPER NUMBER

2667

DATE MAILED: 09/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/014,497	HASAN MAHMOUD ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Prenell P. Jones	2667	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 21-26 is/are allowed.
- 6) ☐ Claim(s) 1,3,6,7,11,12 and 14-20 is/are rejected.
- 7) ☐ Claim(s) 2,4,5 and 8-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Objections***

1. Claim 1 is objected to because of the following informalities: In line 5, Applicant has a typographical error "adjustg". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
3. Claim 11 and 13-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 11, in line 5, Applicant is claiming in line 1-2, "a step of sorting queues such data the queue that can be served at maximum rate with minimum power requirement is given the highest priority", which is not clear to Examiner as to exactly what Applicant is claiming. Appropriate correction is required.

Regarding claims 14-20, the limitations associated with independent claim 14 and 18, in lines 1-2; are not positive limitations because Applicant does ***not provide concrete method steps for performing a function***. Applicants presented claims are vague and indefinite. Furthermore, the claim language that Applicant is presenting does not provide Examiner with enough information to perform a meaningful search. Examiner is not clear as to what Applicant is claiming as his invention. Claims 15-17 and 19-20 depend on claims 14 and 18 respectively, therefore, claims 15-17 and 19-20 are rejected as well.

4. Claim 13 recites the limitation "the determining step" in line 1. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 12 is rejected under 35 U.S.C. 102(e) as being anticipated by Vook et al.

Regarding claim 12, Vook et al discloses (Fig. 1, col. 4, line 37-67, line col. 5, line 33-67) managing resource in a multi-user environment, which includes equalizing techniques utilized with respect to data rates, such as equalizing received signals and at the same time suppressing interference (equalizing interference) in a wireless network.

7. Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by Reed et al.

Regarding claim 14, Reed discloses a data transmission system that includes transmission/reception between multiple radio stations (active users), whereby a pool of

Art Unit: 2667

frequency channels (pool size of data rates) are automatically determined with respect to levels of noise and interference (col. 1, line 43-67, col. 3, line 36-52).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reed et al in view of Ejzak et al.

Regarding claim 15, as indicated above, Reed discloses a data transmission system that includes transmission/reception between multiple radio stations. However, Reed is silent on a controller receiving interference measurements. In analogous art, Ejzak also discloses a radio

Art Unit: 2667

communication system wherein he further discloses radio resources that are managed with the use of base stations and access controllers, whereby the architecture includes multiple active mobile station users (Fig. 1, col. 4, line 26-34, col. 18, line 34-40), and access controllers that receives data burst, which include pilot strength information (interference measured) with respect to multiple base stations/active users (col. 1, line 46 thru col. 2, line 27), and interference is measured and calculated (col. 6, line 7-67, col. 8, line 18-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement reporting interference results to network controller as taught by Ejzak with the teachings of Reed for the purpose of managing a radio transmission system that provides reliable telecommunication and the ability to adapt to transmission changing conditions by utilizing access control features associated with a controller mechanism.

11. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Home et al in view of Noubir.

Regarding claims 1 and 3, Home discloses radio resource management that determining current network blocking rates for data and voice traffic dependent upon predetermined target blocking rates (Abstract, Fig. 1, 5, 6, resource allocation based on priority levels wherein blocking rates are utilized, dynamically adjusting blocking rate thresholds, predefined target blocking rates are assigned priority level, dynamically adjusting channel in response to real-time/voice traffic and non-real-time/data (col. 2, line 10-37, col. 3, line 8-37, col. 5, line 5-2, col. 13, line 31-37). However, Home is silent on determining cost of blocking rates. However, in analogous art, Noubir discloses radio resource management which utilizes resource management algorithms that uses adjusting blocking probability and partitioning time slots,

Art Unit: 2667

frames/radio resources to improve quality and tariff/cost reasons (page 2483, Introduction, page 2484, left column). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement determining cost of blocking rates as taught by Noubir with the teachings of Home to further manage the distribution of resources in a network environment.

12. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noubir in view of Davis.

Regarding claims 6 and 7, Noubir discloses radio resource management by utilizing adjusting partitioning of resources discloses radio resource arrangement (Abstract, Fig. 1, Introduction, resources/slots are partitioned in accordance with request burst, and resource management algorithms utilize power control, page 2484, right col and page 2485, right col). However, Noubir is silent on determining power requirement for a data burst to be transmitted a multiple transmission rates transmitting a data burst dependent upon its data rate having a higher rate and its relative power requirement being lower than other data bursts. In analogous art, Davis discloses determining power requirement for a data burst to be transmitted a multiple transmission rates transmitting a data burst dependent upon its data rate having a higher rate and its relative power requirement being lower than other data bursts (page 5 Table 2, assigning data rates to channels by negotiating data rates/plurality of data rates (page 5, Table 2) to determine required transmission power, mobile sends request messages and service request (burst) to base station requesting data rate/dependent of data rate (page 7, paragraph 0049), having a data rate higher than relative power and lower than other request messages (page 4 paragraph 0023, 0024, page 6, page 7, paragraph 0050). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to

Art Unit: 2667

implement the determining power required as associated with burst request and data rates as taught by Davis with the teachings of Noubir for the purpose of further managing the use of resources in radio environment as to minimize congestion.

***Allowable Subject Matter***

13. Claims 21-26 are allowed prior art.
14. Claim 2, 4, 5 and 8-10 and claims objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
15. The following is a statement of reasons for the indication of allowable subject matter:  
Although the combined prior art of Noubir who discloses implementation of radio resource management by utilizing adjusting partitioning of resources, and Home et al who discloses resource allocation based on priority levels wherein blocking rates are utilized, and Davis who discloses assigning data rates to resources as associated with transmission power, and Kojima et al discloses implementation of radio resource management by utilizing adjusting partitioning of resources they fail to teach or suggest determining the network cost for the current blocking rates periodically, and evaluating network cost wherein the positive constants representing the relative weighing of voice vs. data is factored in the evaluation process, determining if there are burst request to be examined in order to determine power requirement, burst is chosen to be served based on a comparative decision among currently contending data burst users, determining if an emergency burst transmission can be granted whereby power is borrowed.

Art Unit: 2667

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell P. Jones whose telephone number is 703-305-0630. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones

September 7, 2005

  
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9/12/05